

LISTING OF CLAIMS:

1. (Previously presented): An apparatus for producing a part, comprising:
a tool comprising complementary punch and die;
a die holder supporting the die;
a punch guide having a shaft guiding the punch in relation to the die, wherein the shaft is sized and shaped to receive the punch in slidably contact; and
an interface capable of mechanically interfacing a force from a press with the punch in a manner whereby the punch is structurally decoupled from the press.
2. (Previously presented): The apparatus of claim 1, wherein the die holder includes a pocket nesting a mating surface of the die in confronting orientation with a mating surface of the punch.
3. (Previously presented): The apparatus of claim 2, further comprising a backup plate attachable to the die holder over the pocket to secure the die within the pocket.
4. (Original): The apparatus of claim 1, further comprising a spacer disposed between the die holder and the punch guide, such that a workspace is defined between the die holder and punch guide where the punch engages with the die to produce the part.
5. (Original): The apparatus of claim 4, wherein the punch guide, the die holder and the spacer are provided as a unitary structure.
6. (Previously presented): The apparatus of claim 4, wherein the punch guide, the die holder and the spacer are provided as a monolithic structure.
7. (Previously presented): The apparatus of claim 1, further comprising a stop disposed between the press and the punch, along a stroke path of the press, for limiting translation of the punch through the shaft.

8. (Previously presented): The apparatus of claim 1, further comprising a stop disposed along a stroke path of the punch, limiting translation of the punch through the shaft.

9. (Original): The apparatus of claim 8, wherein the punch includes a catch adapted to engage the stop, such that when the catch engages the stop, the stop limits further translation of the punch towards the die.

10. (Original): The apparatus of claim 1, further comprising biasing means coupled to the punch, the biasing means being biased when the punch translates towards the die under the force of the press, the biasing means being capable of moving the punch away from the die when the force is removed.

11. (Previously presented): A system for producing a part, comprising:
a press having a press bed and a press ram;
at least one stamping station supported on the press bed supporting complementary punch and die, each stamping station comprising:
a die holder supporting the die;
a punch guide having a shaft guiding the punch relative to the die, wherein the shaft is sized and shaped to receive the punch in slidable contact; and
an interface capable of mechanically coupling a force from the press ram with the punch in a manner whereby the punch is structurally decoupled from the press ram.

12. (Original): The system of claim 11, wherein the interface comprises a ball attached to the punch and a socket attached to the press ram, wherein when ball engages the socket, the press ram is capable of coupling the force from the press ram to the punch, but being structurally decoupled from the punch.

13. (Original): The system of claim 11, wherein the interface comprises a ball attached to the press ram and a socket attached to the punch, wherein when ball engages the socket, the press ram is capable of coupling the force from the press ram to the punch, but being structurally decoupled from the punch.

14. (Previously presented): The system of claim 11, wherein the interface comprises: an adapter plate coupled to the press, the adapter plate being disposed within the shaft between the punch and the press, wherein the adapter plate is capable of translating longitudinally along the shaft towards and away from the punch; and a valve supplying the shaft with low-pressure hydraulic fluid; wherein when the adapter plate translates towards the punch holder, a uniform, unidirectionally orthogonal force is exerted on the punch to move the punch towards the die.

15. (Original): The system of claim 14, wherein the valve is located between the adapter plate and the punch, the adapter plate being capable of closing the valve when the adapter plate engages the valve as the adapter plate translates towards the punch.

16. (Previously presented): The system of claim 15, further comprising a working pressure relief valve coupled to the shaft for actively controlling force exerted on the punch for producing the part.

17. (Original): The system of claim 16, further comprising a stop pressure relief valve coupled to the shaft for actively controlling a maximum force exerted on the punch.

18. (Previously presented): The system of claim 14, further comprising a stop block located between the punch and the die holder, the stop block inhibiting translation of the punch towards the die holder when the punch holder contacts the stop block.

19. (Previously presented): The system of claim 18, further comprising a spacer disposed between the die holder and the stop block to position the stop block relative to the die holder.

20. (Original): The system of claim 14, wherein the interface further comprises a ball attached to the actuator plate and a socket attached to the press ram, wherein when ball engages the socket, the press ram is capable of coupling the force from the press ram to the actuator plate, but being structurally decoupled from the actuator plate.

21. (Previously presented): The system of claim 11, further comprising a device in-line machining a work piece before it enters the stamping station.

22. (Original): The system of claim 11, further comprising a locating subplate having indexing features adapted to receive the stamping stations and to align the stamping stations relative to each other.

23. (Previously presented): The system of claim 22, wherein the indexing features comprise grooves machined on a surface of a subplate.

24. (Previously presented): A system for producing parts having tolerances within 1000 nanometers, comprising:

a system for producing a part as in claim 11;
a locating subplate having indexing features adapted to receive the stamping station and to align the stamping station relative to another stamping station; and
a device in-line machining a work piece before it enters the stamping station.

25. (Previously presented): A process for producing parts, comprising the steps of: providing a stamping system for producing a part as in claim 11, wherein the stamping system is configured to produce parts having tolerances within 1000 nanometers; and stamping parts using the stamping system.

26. (Previously presented): A part produced by the process of claim 25.

27. (Previously presented): The part of claim 26, wherein the part is an optoelectronic part.

28. (Previously presented): The part of claim 27, wherein the optoelectronic part is sized and shaped to support an optical fiber.